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SEPAROTHECA, A NEW GENUS (COMMELINACEAE)
FROM MEXICO

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While collecting in Mexico in August 1956, the author found in pine woods in the Sierra Madre southwest of El Salto, Durango, a dwarf member of the Commelinaceae only 3-7 cm. high, growing from small, succulent, elongate, tuber-like roots. It has few flowers, with the inflorescence subtended and enfolded by opposite, or subopposite, ovate-falcate to ovate-attenuate foliaceous bracts which are longer than the few cauline leaves.

Examination showed it to have separate sepals which are nearly hyaline, with a few long hairs at their apices and along the outside of the upper parts of their midribs. The corolla is sympetalous with a tube 6-8 mm. long, and lobes 5-8 mm. long, ovate to ovate-lanceolate. The 6 stamens are fertile, with filaments 1-3 mm. long, filiform to flattened, sometimes somewhat spiralled or twisted, inserted on the lower part of the corolla

lobes. The connectives are 1-6 mm. long, flattened, wider than the filaments, sometimes longer.

In Woodson's key to the genera of the Commelinaceae (1942) the combination of sympetalous corollas, leafy-bracted cymes and separate sepals could indicate only *Setcreasea*. However, it could not be any of the species of that genus as treated by E. Matuda (1955). It seemed possible that it might be an anomalous new species of that genus, but, in a family in which generic circumscriptions have been drawn as diversely as in the Commelinaceae, it was thought advisable to check related genera before describing a new species. In so doing, reference was found to *Zebrina* (?) *pumila* described by Greene (1888) from the Sierra Madre west of the city of Durango. This description fits fairly well the species under consideration. An examination of the type, *A. Forrer, s. n.*, from the Sierra Madre west of Durango, altitude 8100 ft., Sept. and Oct. 1881 (ND), shows that it is the same taxon as the one under consideration.

The genus *Treleasea* was erected by Rose (1899) to include three species, previously referred to *Tradescantia*, which have "petals tapering into a claw, forming a tube . . .", epipetalous stamens and stipitate fruits (actually they seem to be pedicellate, not stipitate). He believed its affinities to be "perhaps nearest *Zebrina* . . ."

Greene (1888) in describing *Zebrina pumila* stated, "This curious little plant must surely be a congener of . . . *Tradescantia leiandra*, Torr., which Mr. C. B. Clarke (DC. Monogr. III:318) has referred, with a doubt, to the Central American genus, *Zebrina*." Following the erection of *Treleasea* by Rose, Greene (1900) transferred *Zebrina pumila* to *Treleasea*, stating "This plant, which I, twelve years since, was strongly inclined to make the type of a new genus, certainly falls into Mr. Rose's genus *Treleasea* newly established. It may even be identical with one or the other of the two species recognized by Mr. Rose. But my specimen is not now to be found, unless at the University of California."

Rose later (1903) substituted the name *Neotreleasea*, stating that *Treleasea* had already been used by Spegazzini for another

genus. He included the same species as he had done previously. Then he appended a note concerning *Treleasea pumila* (Greene) Greene (*Zebrina pumila* Greene). He excluded it from his genus *Neotrelsea*, stating that he had seen the type and that “. . . its relationships are more nearly with true *Zebrina*. The two have in common a terminal cluster of flowers subtended by a two-leaved spathe, a narrow tubular corolla, and widely separated anther-cells, etc.”

Thus we find Greene transferring his species to Rose's genus, and Rose subsequently excluding it. Woodson places *Neotrelsea* in *Setcreasea* while Matuda (1955) does not mention this species in his treatment of *Setcreasea*, but he does exclude it from *Zebrina*. From Matuda's treatment it would seem that he does not know the species through actual study, but only through reference to the literature. It seems probable that it has not been recollected until found by the author in 1956. No material has been found at the Gray Herbarium, the U. S. National Herbarium or the Chicago Natural History Museum according to their respective curators to whom the author is grateful for aid.

This taxon has separate sepals as does *Setcreasea*, but has a long, strongly-united corolla tube and long connectives similar to *Zebrina*, and glabrous filaments, sometimes shorter than the connectives, which is characteristic of neither.

Four possibilities seem to occur for the disposition of this species: (1) to place it in *Setcreasea* (*sen. lat.*) as a distinct species; (2) to place it in *Zebrina* as a distinct species; (3) to consider it a connecting link between the two genera and unite them; and (4) to create for it a new genus. The author has concluded that the latter alternative seems to be a logical one.

Separotheca, gen. nov. Commelinacearum. Herbae erectae; caulibus annuis ex radicibus succulentis perennibus; foliis ovato-attenuatis vel linearibus; sepalis 3, distinctis, hyalinis vel subhyalinis; corollae tubo et lobis aequalibus vel subaequalibus; staminibus 6, ad basim corollae lobis affixis; filamentis glabris; connectivis quam filamentis latioribus, nunc brevioribus, nunc longioribus; fructibus siccis, stylis filiformibus, stigmatibus capitatis; seminibus 5, angulatis.

Separotheca pumila (Greene) Waterfall, comb. nov. based on *Zebrina*

(?) *pumila* Greene, *Pittonia* 1: 157–158. 1888: *Treleasea pumila* (Greene) Greene, *Pittonia* 4: 225. 1900.

Stems short, 3–7 cm. tall, annual from elongate tuberous roots; stems and leaves glabrous; stem simple, or branching from the first or second node; first leaf 8–15 mm. long, ovate to ovate-lanceolate; second leaf 2–4 cm. long, ovate-caudate to linear-lanceolate; sometimes a longer third leaf present; bracteal leaves 1.5–5 cm. long, usually longer than the leaf below it, ovate-attenuate to ovate-caudate; flowers few; sepals distinct, subhyaline to hyaline, especially on their margins, pilose along midribs and at apices; corolla pink, 11–15 mm. long, basal half united into a tube, lobes ovate to ovate-lanceolate; stamens 6, fertile; filaments 1–3 mm. long, filiform to flattened, inserted on lower part of corolla lobes; connective 1–6 mm. long, flattened, wider than the filaments, inverted V-shaped, sometimes longer than the filaments; styles filiform; stigmas capitate; fruit a capsule; seeds 5, ca. 2 mm. long and 1.5 mm. wide, more or less angulate, dark brown.

In addition to the type, the following collections have been seen, all from the Sierra Madre; **Waterfall 12673**, shallow soil on rock strata in pine forest, 5 miles west of El Salto, Durango, Aug. 11, 1956; **Waterfall 12704**, open pine woods, wet flats, 24 miles west of El Salto, Durango, Aug. 12, 1956. — DEPARTMENT OF BOTANY AND PLANT PATHOLOGY AND THE RESEARCH FOUNDATION, OKLAHOMA STATE UNIVERSITY, STILLWATER, OKLAHOMA.

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